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ABSTRACT

As part of a 5-year state-coordinated plan for building research and evaluation into the local vocational programs, a state-wide administrators' workshop was held to consider conditions and practices in educational operations which inhibit the use of research findings, and to develop guidelines for minimizing the effect of deterrents to local implementation of research and evaluation in vocational education. The 50 local and national participants of this 4-day workshop heard presentations on: (1) "Research and Evaluation in Local Schools" by Gordon Law, (2) "Priorities for Research and Evaluation" by Robert Worthington, (3) "Federal-State Guidelines for Vocational Education" by Charles O'Connor, (4) "How a County Superintendent of Vocational Education Views Research and Evaluation" by Robert Toft, (5) "Evaluation Supported by Research" by Po Yen Koo, and (6) "Research and Development in Industry" by Pecka and Landauer. Products of the presentations and discussion sessions include (1) Deterrents to Research and Evaluation, (2) Guidelines for Minimizing Deterrents, (3) Guidelines for Building Research and Evaluation into Local Practice, and (4) Guidelines for Specific Action in Home School Districts. (JS)

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LEADERSHIP AND CHANGE

FINAL REPORT

LEADERSHIP IN VOCATIONAL - TECHNICAL EDUCATION

ADMINISTRATORS' WORKSHOP FOR BUILDING RESEARCH AND EVALUATION INTO LOCAL PRACTICE

RUTGERS
THE STATE UNIVERSITY
NEW BRUNSWICK
NEW JERSEY

MAY 5-6, 1970
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FINAL REPORT

LEADERSHIP AND CHANGE IN VOCATIONAL-TECHNICAL EDUCATION: ADMINISTRATORS' WORKSHOP FOR BUILDING RESEARCH AND EVALUATION INTO LOCAL PRACTICE

JULY 1970

Workshop Director - Dr. Gordon Law

Research Assistant - J. G. McNeill

FINAL REPORT

LEADERSHIP AND CHANGE IN VOCATIONAL-TECHNICAL EDUCATION: ADMINISTRATORS' WORKSHOP FOR BUILDING RESEARCH AND EVALUATION INTO LOCAL PRACTICE

Held at

The New Jersey Residential Manpower Center, Edison, New Jersey

May 5-6, 19-20, 1970

by

The Department of Vocational-Technical Education
Rutgers University - The State University of New Jersey

under a grant from the

Division of Vocational Education
New Jersey State Department of Education

Workshop Director — Dr. Gordon Law

Research Assistant — J. G. McNeill

July, 1970

ACKNOWLEDGEMENTS

In the report of the first Administrators' Workshop for Building Research and Evaluation into Local Practice, it is important to recognize all who assisted in making it the success that it was.

Our sincere appreciation goes to the Workshop Committee consisting of Mrs. Dorothy Anderson, and Messrs. J. Cummings, R. Girandola, Po Yen Koo, J. McNeill, R. Noguera, R. Pecka, and R. Toft.

Our thanks goes to the New Jersey Residential Manpower Center for providing the meeting rooms and luncheon facilities. Our guest speakers did an excellent job in the orientation of participants to the workshop subjects.

We appreciate the support, cooperation, and assistance of Drs. Robert Worthington, Morton Magules and Po Yen Koo of the State Department of Education, and Dr. Carl J. Schaefer, Chairman, Department of Vocational-Technical Education at Rutgers University.

Finally, a note of thanks for the excellent spirit of inspiration and discovery exhibited by the participants in developing research and evaluation guidelines.

Dr. Gordon Law
Rutgers University

July 15, 1970

Dr. Morton Margules
Associate State Director
Division of Vocational Education
New Jersey State Department of Education
Trenton, New Jersey

Dear Dr. Margules:

Following is the final report of the Administrators' Workshop For Building Research and Evaluation into Local Practice. Included are statements relative to the overall purpose of the workshop and its specific objectives and summaries of the six major presentations. Of special significance, are guidelines for dealing with deterrents to change and guidelines for building research and evaluation into local practice. These were generated out of small group discussions. Here, it is encouraging to note that a number of specific plans for local research and evaluation activity were developed by participants of the workshop.

The Administrators' Workshop, conducted in May 1970, represents the first phase of a five-year project -- a New Jersey state coordinated plan for building a continuing research and evaluation component into local practice. A logical sequel for next year will be a series of regional workshops in which the ideas of the first program will be used as bases for further local implementation of research and evaluation. Also planned for 1971 is a research project designed to further investigate the change process in vocational education. This study will analyze critical elements which inhibit or favor the initiation of research and evaluation activities in local practice.

Let me express my appreciation for your leadership and assistance in this project. Your confidence in the overall plan and your judicious suggestions for making improvements have contributed to the initial success.

Sincerely yours,

Gordon F. Law
Associate Professor
of Education

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INTRODUCTION

On May 5,6 and 19,20, 1970, an Administrators' Workshop was held at the Residential Manpower Center in Edison, New Jersey. This activity represents the First Phase of a New Jersey Coordinated Plan for Building Research and Evaluation into the Local Vocational Program.

To achieve the main objective of the overall proposal, a total of nine related and coordinated activities are planned. Extending over a five-year period, these activities are:

1. Program Planning
2. Research Projects
3. Personnel Orientation
4. Development of Priorities and Guidelines
5. Training Programs for Research and Evaluation Personnel
6. Preparation of Handbooks on Research and Evaluation
7. Organization of Pilot and Demonstration Programs
8. Project Evaluation
9. Final Report

The state Administrators' Workshop on vocational education research and evaluation had 50 participants: local and area vocational education administrators; college instructors involved in the preparation of vocational educators; state education department representatives; U. S. Office of Education representatives; vocational graduate students; teachers of vocational subjects; and persons involved in research and evaluation activities in industry and commerce.

The purpose of this project was to take an initial step in promoting the development of research and evaluation thinking and action at the local administrative level. Specific objectives of the workshop were:

1. To consider conditions and practices in educational operations which inhibit the use of research and evaluation, or the initiation of research and evaluation practices on the local educational level.

2. To identify specific deterrents to research and evaluation in various educational settings and institutions.

3. To develop guidelines for change - for minimizing the effect of deterrents to local implementation of research and evaluation in vocational education.

4. To develop guidelines for specific action at state and local settings.

5. To develop guidelines for long-range planning.

The workshop was organized with the assistance of a planning committee comprised of local vocational administrators, teacher educators, and state education department personnel. Originally planned to extend over three consecutive days, the final decision to conduct a workshop having two night-day sessions spaced two weeks apart came from the realization that busy administrators would not be able to spend three full days away from their local responsibilities.

The program was comprised of six presentations and a series of small group workshop sessions in which deterrents to local implementation of research and evaluation were identified. The second phase of the workshop, beginning the evening of May 19, focused on a more positive note -- the development of guidelines for building research and evaluation into local practice. On May 20, the last day, plans for specific actions in home districts were developed on an individual basis.

ADMINISTRATORS' WORKSHOP PROGRAM

Tuesday evening - May 5

6:30-7:00 p.m.	Registration and Coffee.
7:00-7:45	General Session: Introductions, Keynote Presentation, "Research and Evaluation in Local Schools," Dr. Gordon Law, Rutgers University.
7:45-8:10	General Session: Workshop Objectives and Procedures, and Small Group Organization, Joseph McNeill.
8:10-9:30	Small Group Meetings - "Brainstorming; General Inhibitors to Research and Evaluation at the Local Level."
9:30-10:00	Brief Feedback Reports.

Wednesday - May 6

9:00-9:30 a.m.	General Session: "Priorities for Research and Evaluation," Dr. Robert Worthington, N. J. State Director of Vocational Education.
9:30-10:00	General Session: "Federal-State Guidelines for Vocational Education," Mr. Charles O'Connor, Director of Adult Vocational Education, U. S. Office of Education, Region II.
10:00-10:20	Break
10:20-10:30	General Session: Directions to Workshop Groups, Joseph McNeill.
10:30-12:00	Small Workshop Groups, "Specific Deterrents to Research and Evaluation."
12:00-12:50 p.m.	General Session Feedback Reports.
1:00-2:00	Lunch: Residential Manpower Center Cafeteria.
2:00-2:15	General Session: Progress Report; Directions to Workshop Groups, Joseph McNeill.
2:15-3:30	Small Workshop Groups: "Guidelines for Minimizing Deterrents to Local Research and Evaluation."
3:30-3:45	Break
3:45-4:15	General Session: Brief Feedbacks: Dr. Gordon Law.
4:15	Adjournment until 6:30 p.m., May 19.

Tuesday evening - May 19

6:30-6:45	Coffee
6:45-7:00	General Session: Review of Workshop Activities on May 5-6, Dr. Gordon Law.
7:00-7:30	General Session: "How a County Superintendent of Vocational Education Views Research and Evaluation," Robert Toft, Superintendent of Vocational Education, Cape May County.
7:30-7:45	General Session: Instructions to Workshop Groups, Joseph McNeill.
7:45-9:15	Small Workshop Groups: "Guidelines for Building Research and Evaluation in Local Practice."
9:15-10:00	Feedback Reports.

Wednesday - May 20

9:00-9:30 a.m.	General Session: "Evaluation Supported by Research in Vocational-Technical Education," Dr. Po Yen Koo, Research Coordinating Unit, New Jersey State Education Department.
9:30-10:20	General Session: "Research and Development in Industry." Robert Pecka, American Telephone and Telegraph; Thomas Landauer, Bell Laboratories.
10:20-10:40	Break
10:40-12:00	Small Workshop Groups: "Guidelines for Specific Actions in Home School Districts."
12:00-12:15	General Session: Feedback Reports.
1:00-2:00	Lunch: Residential Manpower Center Cafeteria.
2:00-3:30	General Session: • Review of Workshop Objectives and Specific Commitments. • Guidelines for Workshop to be held in fall of 1970. • Guideline for Proposed Research Activities. • Guidelines for Proposed Pilot and Demonstration Projects.
3:30-4:00	Discussion and Adjournment.

PRESENTATIONS

A total of six presentations were made at the Administrators' Workshop:

1. "Research and Evaluation in Local Schools"
   Gordon Law, Rutgers University

2. "Priorities for Research and Evaluation"
   Robert Worthington
   New Jersey State Director of Vocational Education

3. "Federal-State Guidelines for Vocational Education"
   Charles O'Connor
   Director, Bureau of Adult Vocational Education
   Region II, U. S. Office of Education

4. "How a County Superintendent of Vocational Education Views Research and Evaluation"
   Robert Toft
   Superintendent of Vocational Education,
   Cape May County

5. "Evaluation Supported by Research"
   Po Yen Koo
   Director of Research
   New Jersey State Education Department

6. "Research and Development in Industry"
   Robert Pecka and Thomas Landauer,
   American Telephone and Telegraph
   Company and Bell Laboratories, respectively

Presentation 1

"Research and Evaluation in Local Schools"

Dr. Gordon Law
Rutgers University

How can a continuing research and evaluation component be built into the vocational education program? Resistance to change is a phenomenon common to all kinds of agencies and institutions. In education, the lag between the acquisition of research-based knowledge and its practical application has been said to be as much as twenty to thirty years. This condition may have been tolerable in times past; but now in a period of unprecedented accelerated change, such a situation can no longer endure. When the burgeoning problems of school and society grow faster than solutions, the educational system must have a built-in mechanism for change.

Educators are generally aware that the slow process of evolution is no longer satisfactory. But each segment of the schools operation seems to be trapped in a complex web of traditions, regulations and patterns of behavior that inhibit ready implementation of legitimate innovative activities; and, isolated or sporadic efforts that fail to involve all elements of operation and control are often futile.

In private enterprise the value of research has become generally accepted. Each phase of operations, such as site development, manufacturing processes, or market potential, are subject to constant analysis and revision. Yet the multi-billion public school program of this country continues to exist without a built-in research component. National and state research agencies are providing valuable leadership and knowledge, but a major hurdle still must be overcome.

Since 1964, when vocational research monies authorized by Public Law 88-210 began to be used, there has been a considerable volume of research activity at both state and federal levels. Significant progress has been made in the growth of organizations for research and systems for research dissemination, as well as programs for the training of research personnel. But a growing emphasis is now being placed on the application of research in implementing legitimate change in local educational practice.

The National Conference on Research, 1968 Vocational Education Amendments, held February 18-20, 1969 in Oklahoma City had an introductory address by David S. Bushnell, Vocational Research Division Director, U. S. Office of Education; seven major presentations; and a series of workshop sessions by conference participants.

Bushnell's speech on "Past, Present and Future Priorities for Vocational Education Research" (1, Pg. 17) reviewed the six areas of priority emphasis that guided the expenditure of over $60,000,000 under Public Law 88-210, and the implications of the 1968 Amendments for research. When speaking of the future priorities for vocational education research, Bushnell named two: program evaluation; and organization and administration at state and local levels, which are especially relevent to the focus of this workshop.

Among the seven papers presented at the National Conference, there was a common concern for the implementation of research-based change. Moss and Malinsky's paper on "Strategies for Develop-Model Annual and Long-Range Plans" (1, Pg. 99) presents an "Educational Change Model," derived from the prior work of Guba and Clark, and describes nine functions considered essential to facilitate change. These functions are:

1. Conducting operational (applied) research to provide special information immediately useful in decision-making or knowledge immediately in the operational program;

2. Developing new, and updating existing, curriculums and instructional materials;

3. Evaluating the effectiveness of occupational education programs;

4. Stimulating, facilitating, and coordinating the innovative research and development efforts of individuals and groups;

5. Inventing, engineering, producing, and evaluating prototype innovative curriculums and instructional materials;

6. Conducting applied research on methodological, continuing, and complex problems which have potential for making long-range and general qualitative improvements in occupational education;

7. Administrating research-related grants and contracts with agencies and institutions to monitor and supervise the ongoing research-related activities supported by state controlled funds;

8. Disseminating the results of research-related activities; and

9. Coordinating and conducting training activities designed to increase the number and improve the competence of producers and consumers of research.

The AVA publication "Research and Implementation" (2, Pg. 5-6) states that research must be an integral part of school operation -- not something imposed from other institutions and agencies: "If meaningful change for improvement is to take place in vocational education, the impetus for such change can only come about through the total involvement of school personnel....For teachers, counselors, and school administrators to think and act in research terms, they must receive a substantial orientation to research in their professional training, and be given opportunities to participate in the conduct of research."

A "social engineering" project in three Michigan cities is being conducted by the Batelle Memorial Institute of Columbus, Ohio, for the U. S. Department of Labor. The purpose of this study (as described by Howard Rosen, Director of Research for the U. S. Department of Labor, at a speech given at Pennsylvania State University, October 29, 1969 (3)) is to identify problems that inhibit change in people and institutions, and to develop models for action to accelerate the change process. An apparent weakness in the design of this project is that the persons directly involved in affecting permanent change, the local teachers, counselors and school administrators, would have <u>passive</u> roles in the process. The change agents would in fact be "outsiders" who might be cast in the role of "efficiency experts." The basic question here would be: "What happens after the experts have gone?"

In our workshop, we are going to hear some outstanding presentations from persons in industry, federal and state government, and those with local administrative responsibility.

I am sure that these speeches will be interesting and valuable elements in our program. But most important of all will be the contribution made by each of you -- first in the small group sessions, and then in the implementation of research knowledge and activity and the application of evaluation procedures in your home school districts.

The real pay off of a conference is not what transpires while it is in session, but rather, what comes as a result back home. On this note please consider our letter to you in which you were asked to think about specific plans of action for research and evaluation that could be initiated in your home districts.

You will recall that a list of suggested actions was given to stimulate thought about what could be done to evoke local commitment. This list included: the identification of a staff member to work on plans for research and evaluation; providing time for planning; appointment of a staff-steering committee; and making provisions for in-service institutes to help school people become more closely involved in research and evaluation thinking and action.

Now, as we prepare to make this program truly a workshop, one in which each of you makes an important contribution, let me turn our meeting over to Joseph McNeill, who will give you specific instructions.

And remember, a workshop like this is something like a "bikini." You get out what you put into it.

Presentation 2

"Priorities for Research and Evaluation"

Dr. Robert Worthington,
New Jersey State Director of Vocational Education

Concerning the purposes of evaluation in vocational education and manpower training, administrators must evaluate the costs and benefits to the student; specific local program objectives should be evaluated to see if the students are receiving their money's worth. Evaluation must also be built into all vocational education and manpower training programs when they are designed. But, the fundamental purpose of evaluation is the improvement of instruction.

The New Jersey pilot effort in evaluation began in 1965 when an occupational research and development unit was established. The state later became involved with Colorado and Kentucky, via the Ohio State Research Center, in developing a model for vocational education. The first report on this project indicated that most existing techniques of evaluation lack precision and are highly subjective; those that may be more quantitative, and therefore, more objective, sometimes quantify variables which are superficial or irrelevant (i.e., evaluation in terms of facilities, number of students, etc.). The most rational method seems to be to measure the learner's behavior at some future date. New Jersey is presently participating in Project Metro, examining the products of vocational education in major cities in the country. The factors considered include: the ease of obtaining employment for graduates; length of time on the job; potential for advancement; job security and success. Once these elements can be measured more objectively, efforts to determine their relationship to previous formal training can be attempted.

The U. S. Office of Education sees these goals and program objectives for vocational education nationally in 1971: 1) development of a comprehensive educational system insuring that everyone be adequately prepared for satisfactory employment; 2) improvement in the quality of vocational education, and getting it back into the mainstream of education; 3) establishment of priorities emphasizing the disadvantaged; 4) holding the schools responsible for every student's success in the future; 5) the preparation of highly specialized manpower supportive personnel to meet critical labor shortages in technical fields; 6) establishment of partnerships between employers and educators; and 7) development of a national manpower policy.

To achieve these objectives, five target groups, delineated according to age and schooling, should be the concern of vocational educators. At each level, progressively more detailed information about, and experience of, work is offered.

The National Advisory Council recommends that evaluation in the future focus on: state goals and priorities set forth in state plans; the effects of vocational educational amendments of 1968 in the year under review; population needs; identifying employment opportunities in the state, and vocational education services required to meet them; and developing and employing all human resources available.

Presentation 3

"Federal-State Guidelines for Vocational Education"

Charles O'Connor
Director of Planning, U. S. Office of Education, Region II

The current status of funds for education in New Jersey is as follows: the state had anticipated $6,497,533 at the beginning of this year, and has received as of May 5, 1970, $9,932,416 under basic grant. Specific figures concerning Consumer and Homemaking, Cooperative Education, Work-Study programs, Research and Innovations, and Special Needs programs show that in each case, the funds received exceed those anticipated. This situation represents 100% funding -- a new dimension in vocational education.

One budgeting problem that arises is what to do with funds received in the last three months of the school year. This year's funds were designated as two-year funds, so July 1, 1971, becomes the deadline for spending. This is desirable also because it refers to adult education and library programs as well as vocational education. Regarding the 1971 budget, the requested $300,336,000 is available, and Congress has added another $50,000,000.

To affect program change in vocational education, more comprehensive federal, state, and local evaluation systems are necessary. Specifically, information about manpower needs, job opportunities, vocational education needs of the population to be served (particularly involving the handicapped and disadvantaged), and resources required, must be obtained. In the future, appropriations will be used for studies and projects including: studies of the impact of new state-planned funding requirements on program change; follow-up surveys of graduates and adult vocational programs; analyses of effectiveness of resources allocated to programs for the handicapped and disadvantaged; analyses of state and local planning, evaluation, and reporting systems; national and regional workshops involving state supervisors to provide the headquarters, and a regional staff for the assessment of program accomplishments and deficiencies; and studies of the needs and availability of post-secondary education, including provisions for new and emerging occupational areas.

Direct numerical needs of localities versus the state versus the federal government were recently evaluated in Washington, and local evaluation responsibilities were indicated. They include: general state reporting and evaluation requirements; an annual

local plan for vocational education; detailed feedback on benefits and cost effectiveness of individual school program efforts; local community needs; business, industrial, community action groups; and local governmental and advisory groups.

Next year every state will be evaluated, and the results reported, including a reflection of what was actually observed in vocational education and expressing accomplishments and deficiencies. Past experiences with such evaluations have indicated that vocational education may, and possibly should, differ widely from state to state depending on the occupational needs and opportunities of each state.

Presentation 4

"How a County Superintendent of Vocational Education Views

Research and Evaluation"

Robert Toft
Superintendent of Vocational Education,
Cape May County, New Jersey

Webster's Dictionary defines "research" as: "critical and exhaustive evaluation or experimentation having for its aim the discovery of new facts and their correct interpretation; the revision of accepted conclusions, theories, or laws in view of newly discovered facts or the practical application of such new or revised conclusions, theories, or laws." The key word here seems to be "new"; research is concerned with continual discovery.

The work done at Oklahoma State and Ohio State by their Research Coordinating Unit offers a five-stage adoption process which is as follows: 1) development of an awareness of alternatives; 2) awakening of interest and continued searching for more facts and details; 3) evaluation and assessment of these findings; 4) implementation of the findings on a limited basis (preceded by modification to the local situation); and 5) adoption of full-scale operational use of research results. Applying this process to the Cape May County school system, perhaps, a group of qualified people, experienced in vocational education could evaluate the Cape May system and indicate possible achievement in the future; a team of these experts could prepare project proposals, and the county would determine budgeting factors, and apply the plan.

Several conclusions for local level approach to vocational education follow. A type of "soul-searching" research is needed, where the considerations include justification of a particular program, consideration and determination of the length and nature of the jobs of hired personnel in the program, etc.. For example, in Cape May County, a program was selected, established, and made operational (through program pilot funding) with the idea that when the pilot funding ceased, the program would continue as part of the total system. One result of this attitude was a trust of the administration on the part of the hired personnel.

Secondly, vocational education should make use of the support afforded it by Congress which has mandated study in this field and demanded results. There is also a great need for the examination of alternatives, which local superintendents appear to wish to do. In addition, a future curriculum laboratory on the federal

level is indicated, where project proposals would be formulated. At present, there is much county-to-county repetition of the same results in terms of vocational education programs.

Finally, personal involvement is necessary if research is to be meaningful. As administrators are often too busy accomplishing prescribed jobs to consider research, the question as to who can afford this personal involvement arises. From this question, others spring:

Who evaluates the findings?

Who applies the findings?

How does a graduate research student experience peripheral causes and effects tied to local administration of a school program? And,

How can communications between states and localities be improved?

Presentation 5

"Research and Development in Industry"

Dr. Thomas Landauer
Bell Laboratories
(Introduced by Robert Pecka, American Telephone and Telegraph Co.)

(Dr. T. Landauer is a member of the technical staff of Bell Laboratories, Murray Hill, New Jersey, the largest private research institution in the world. His background includes experience in learning and behavioral research, and experience at Harvard and Dartmouth Schools of Education, as well as at Stanford University.)

There is a need for research in questions of education which is recognized by the Bell System as well as educators and the public at large. However, research done by Bell is concerned with basic theories of science -- in education, for example, the research is directed toward trying to understand the learning process, and virtually inapplicable work, at present, in memory -- with a faith in long-range tangible applications. But this is not sufficient; there is a further need for small-scale, on-the-scene, developmental research, making use of trial and error methods.

In education, there does not appear to be any group doing this kind of research. The teachers, who have the problems and students immediately before them, should be performing research of this cut and dried variety. Through resulting ideas for new ways and experience, a piecemeal progress will occur.

One method of research that requires little of the paraphernalia that traditionally makes research difficult, and yet is valid and rigorous follows. It is first necessary to avoid the type of thinking where the educator believes he knows all about instruction, and can, therefore, not evaluate his results realistically. From this grows a need for someone to evaluate the research at various points during its course. One also cannot rely on personal judgement to evaluate an idea; it must be tried.

The first step in the actual method is to make sure the trial is fair. For instance, assume there are two sessions of a course totalling forty students; the students would be divided into two classes in some reasonably even way (one being taught by the old method, and the other by the new) and then compare the results. One valid way of equalizing the classes is "matching." That is, students would be paired off according to intelligence; but since they cannot be matched in environment and experience, the splitting of the pairs into the classes must be done arbitrarily. The

experiment itself should be for a small thing, the combination of many small results affording progress. In evaluating results, a standard method should be used, e.g., using long-distance factors such as the effect of a method of teaching years later; there must be an objective criteria not subject to human bias.

Continuing with the example begun above, in evaluating results, the researcher would determine in how many pairs the new treatment is more successful than the old: the higher the number, the more probable that the results are due to the outside factor, i.e., the new method of teaching. The final step in this research method would be to draw tentative conclusions, repeat the experiment, and possibly then draw final conclusions.

The progress of education will depend on many instructors trying ideas in the above manner, evaluating the results, using simple statistics determine the degree of success, and if impressive, communicating the information to others. Whether or not teachers embrace this method will depend on the administrator rewarding such behavior.

Presentation 6

"Controversies in Educational Evaluation"

Dr. Po Yen Koo
Research Coordinating Unit
New Jersey State Department of Education

In discussing problems of evaluation, I have found that the variety of definitions and burgeoning of new terms seem to bother many administrators and teachers who are earnestly seeking effective ways for evaluating their vocational and technical programs. Indeed, such terms as "internal" and "external" evaluation (Gagne and Dick, 1961, also Schaefer, 1966), "qualitative" and "quantitative" evaluation (Hurt, 1966), "process" and "product" evaluation (Bradfield and Moredock, 1957, also Moss, 1968), "formative" and "summative" evaluation (Scriven, 1966), and "educational accountability and audit system" (Donahue and Rhodes, 1970), can be confusing and perplexing. The purpose of this paper is to clarify a few basic concepts of evaluation with special reference to vocational and technical education.

To evaluate is "to examine and judge concerning the worth, quality, significance, amount, degree, or condition of" according to Webster's Third New International Dictionary. A rationale can be made to explore the possible questions involved in evaluation, as shown in the following diagram:

WHO
HOW
WHEN } to EXAMINE WHAT, and

HOW to JUDGE?

Stated plainly, these questions are: Who is to examine? How to examine? When to examine? What to examine? and, How to judge?

In the following paragraphs, I shall discuss a controversial issue under each of the questions to exemplify the current thinking in educational evaluation, and to clarify certain basic concepts therein.

WHO is to EXAMINE?

Exemplary issue: Self evaluation versus outside evaluation

Self evaluation refers to evaluation of a school's program by its own teachers and administrators, usually through committee work. The difficulty in this type of evaluation lies in the fact that many school personnel lack necessary competence in carrying out an evaluation. It may also be true that the people who operate a program may be so involved in it that they find objectivity difficult and fail to see its weaknesses. On the other hand, outside specialists may possess all the expertise of evaluation, but may not be able to sense all the concerns of the school staff and the people of the community. A strong argument for self evaluation is that if the purpose of evaluation is to seek improvement in instruction, then the program people concerned must be involved and engaged in evaluation, for they are the persons who will subsequently implement the consequent recommendations for change.

The keyword here is "purpose". Both self and outside evaluation can be useful, depending upon the evaluator's purpose. Of course, there is always the possibility of the two in combination. For example, the National Study of Secondary School Evaluation, 1969, suggests:

> The self evaluation may be undertaken by a school desiring to study and improve itself, as well as by schools undertaking self-study as a first step in meeting accreditation requirements. In either case, a committee outside the school system may be invited to visit the school in order to observe its operation. The visiting committee's evaluation serves as a check on the evaluation made by the school staff.

HOW to EXAMINE?

Exemplary issue: Formative versus summative evaluation

Scriven uses the two terms in his paper "The

Methodology of Evaluation" (1966) to distinguish the "forming" role from the "summing-up" role of evaluation, with particular reference to curriculum evaluation. In Scriven's words, the formative role of evaluation is "to discover deficiencies and successes in the intermediate versions of a new curriculum," while the summative role is "concerned with evaluating the effects of a whole teacher-curriculum package and has no need to identify the specific agent responsible for the overall improvement or deterioration."

Formative and summative evaluation are therefore roles of evaluation, not procedures for doing evaluation, according to Scriven. As to how the methods of the two kinds of evaluation differ from each other, no details are given in Scriven's paper. However, in dealing with the two types of evaluation, Moss (1968) thinks that:

> The difference between these two kinds of questions engender some important distinctions in the criteria employed by formative and summative evaluation. Formative evaluation derives its comparative base from within the same program. Comparisons may be between actual and expected outcomes, present and past outcomes, or between concurrent sets of outcomes derived from manipulating certain program characteristics. In the case of developmental projects, immediate outcomes are typically used; for improving established programs, intermediate outcomes are sometimes employed as criteria. Parts of the program or the total program may be the subject for evaluation.
>
> On the other hand, summative evaluation can best be accomplished by comparing the outcomes of two or more programs. Since the programs may have different intended outputs, the evaluative criteria employed must include all of the relevant expected outcomes. The outcomes used are usually intermediate, since they frequently provide a more meaningful basis for comparing different programs than do immediate outcomes.

The distinction between formative and summative evaluation does not seem to be important; and the dichotomy of roles of evaluation does not seem to be very appropriate. As a matter of fact, many more roles of evaluation than the two are mentioned in Scriven's paper.

As far as methodology of evaluation is concerned, Moss' words do not seem to add much new knowledge to evaluation either. According to Moss, "formative evaluation derives its comparative base from within the same program," and "on the other hand, summative evaluation can best be accomplished by comparing the outcomes of two or more programs." At the same time, he thinks that "comparisons (in formative evaluation) may be between actual and expected outcomes." It is certainly hard to justify how "expected outcomes" can be considered here as a "comparative base from the same program."

By making the foregoing statements, I hope I have not left an impression that How to Examine is not an important problem. On the contrary, it appears to me that much research is badly needed with regard to the methodology of evaluation.

WHEN to EXAMINE?

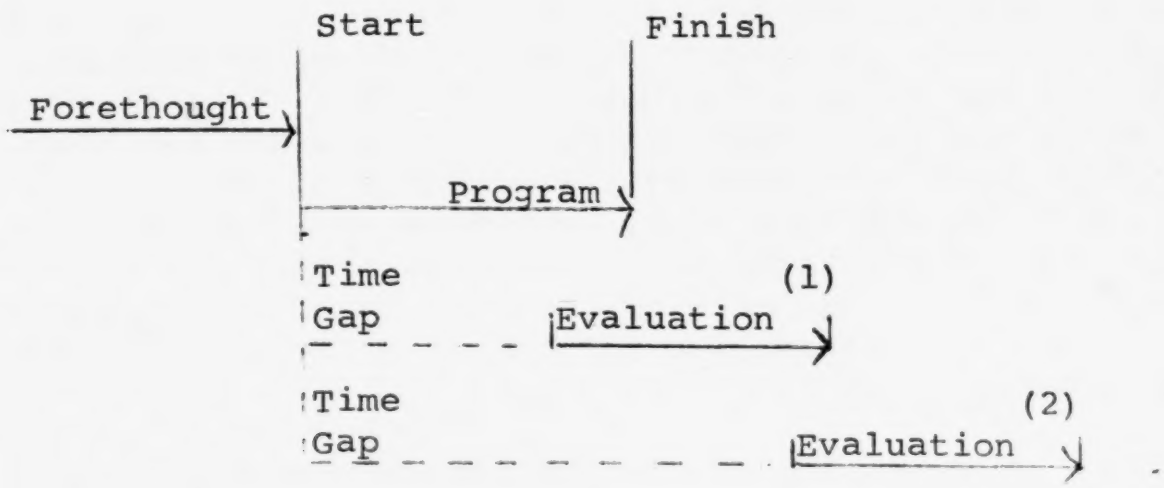
Exemplary issue: Forethought versus afterthought

Robert M. Worthington, State Director of Vocational Education for New Jersey, brought up this issue in an address delivered at a Rutgers University workshop for local vocational education administrators in May, 1970. The theme of the workshop was how to build a continuing research and evaluation component into every phase of local school operation. Worthington contended that evaluation is an afterthought. Although he did not belittle the usefulness of evaluation, he advocated the more progressive idea that the administrator should be vigilant at all times for any symptom of something going wrong so that immediate corrective action may be implemented.

Basically, the idea of forethought is one of preventive maintenance. It would be desirable to develop a set of warning signals or indicators to alert the administrator when something begins to go wrong in his school or program, so that remedial measures might be taken promptly. The administrator

might even use the warning signals for routine periodic checks on the school's programs to ensure that nothing will ever go too far wrong.

True forethough precedes a program, as shown in the following diagram:



It can be seen, then, that evaluation is necessarily an afterthought, for, as defined previously, to evaluate is "to examine and judge." How can one judge something before it happens? One can at most plan to examine and judge prior to program and make the evaluation an integral part of his educational process.

The time gap between the start of evaluation and the event itself may sometimes be a crucial issue. For example, in discussing the experimental type of evaluation, Stufflebeam (1968) points out that "it is too late to make decisions about plans and procedures which have already largely determined the success or failure of the project." Here, again, the purpose of evaluation is the determining factor. If the purpose is to seek ways for improving an ongoing program, then it is imperative that the time gap between the onset of the program and the beginning of evaluation be shortened as much as possible. Of what purpose is evaluation if it serves only as an end in and of itself? "Evaluation (1)" in the preceding diagram illustrates a short time gap.

On the other hand, if a follow-up study of the graduates of a program is to be conducted, it just cannot be started before the program is completed. A product can not be studied until it is indeed a product. This latter situation is illustrated as "Evaluation (2)" in the diagram.

WHAT to EXAMINE?

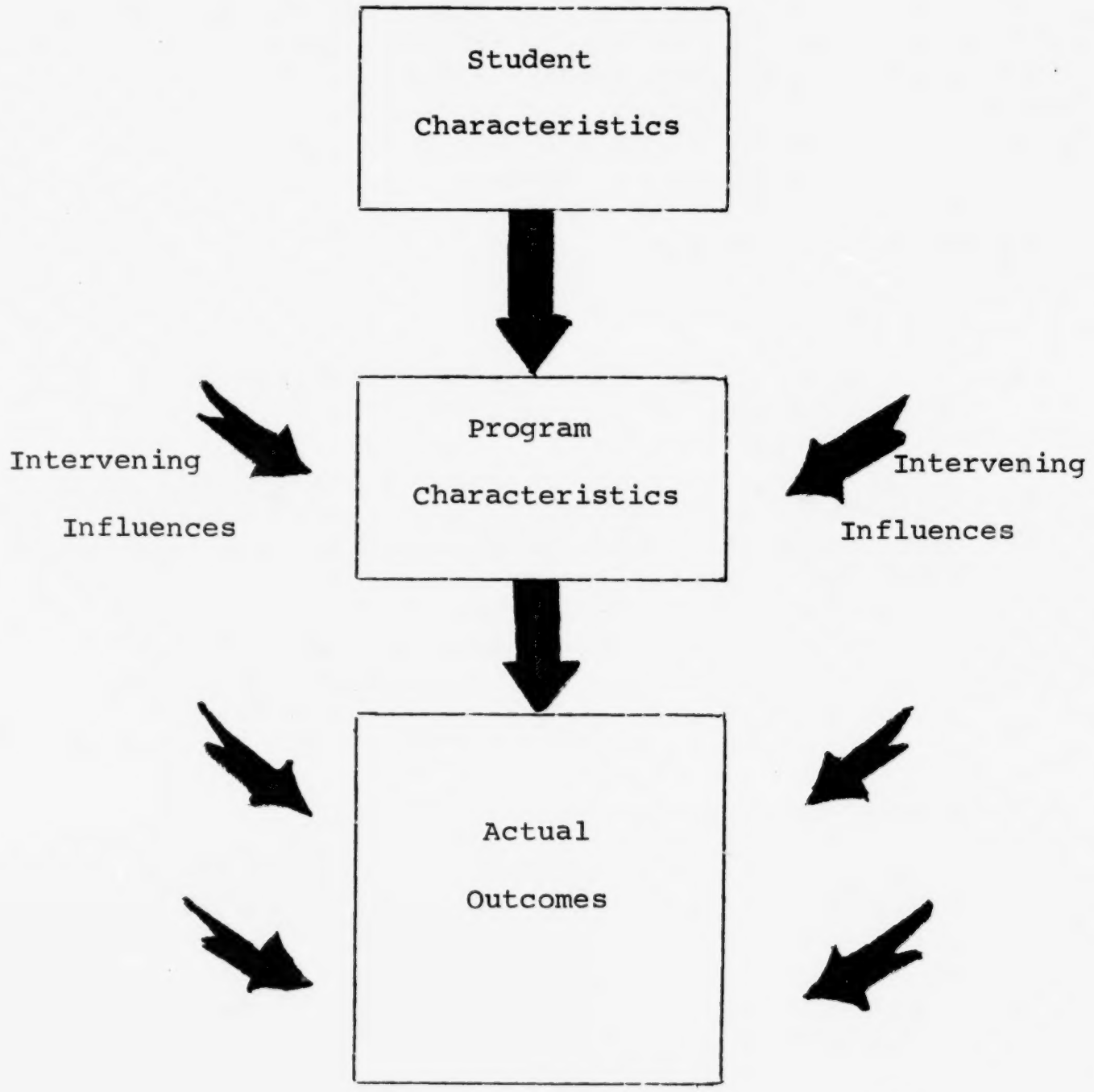
Exemplary issue: Process evaluation versus product evaluation

After analysis, an educational system can be divided into its major components and evaluation can be done in regard to these components. Tyler (1954) lists three kinds of evaluation that may be used to judge schools, namely, evaluation of structure (referring to physical and human facilities), evaluation of process, and evaluation of product. Stufflebeam (1968) divides evaluation into four areas: context evaluation, input evaluation, process evaluation, and product evaluation. Moss (1968) introduces as the major components of the evaluative system student characteristics, program characteristics, intervening influences, and actual outcomes, as shown in the following diagram, designed by him.

Moss maintains that:

> First, the criteria by which instructional programs are to be evaluated must be the outcomes -- the products -- of instruction. Program characteristics cannot be used as evaluative criteria, for, by so doing, we assume, rather than prove, that those characteristics are good. Given the present state of knowledge, the major purpose of evaluation must be to determine which program characteristics actually produce the desired outcomes for a certain group of students. Almost none of our cherished "principles" of vocational education practice have been empirically validated. They have about as much scientific status right now as old wives' tales.

MAJOR COMPONENTS OF THE EVALUATIVE SYSTEM



Sponsors of NAEP (National Assessment of Educational Process) hold a similar viewpoint. In fact, when Francis Keppel became the U. S. Commissioner of Education, he strongly advocated a periodic evaluation of the schools based upon their "outputs," instead of "inputs." This advocacy was the origin of NAEP.

A brochure brought out by the Michigan State University (n.d.), "A Systems Approach to the Evaluation of Vocational Education," also asserts that "emphasis in program evaluation in local public schools should be on goals and outcomes rather than, or in addition to, ways and means."

While there is little doubt that program merits should be judged in terms of outcomes, the present status of the science of education does not seem to warrant the use of outcomes alone as the only dependable means for assessing the strengths and weaknesses of the educational process. Let us refer to Moss' diagram again. Who can tell what functional relationship exists between the actual outcomes and the program characteristics?

Mathematically, the relationship can be expressed as:

Actual outcomes = f (S, P, I), where

S = Student Characteristics

P = Program Characteristics, and

I = Intervening Influences.

In other words, the actual outcomes of a program are a function of student characteristics, program characteristics, and intervening influences.

Although the formula does not tell us how to evaluate an educational program, it does reveal, unfortunately, that more than one independent variable can effect changes in the dependent variable, the "actual outcomes." Not until more research is accomplished to single out various correlations between the dependent and independent variables, or until factor analysis is used for large scale evaluation designs, will the evaluation of outcomes alone tell anything about the processes involved in the program.

On the other hand, process evaluation should not be discredited simply because "we assume, rather than prove, that those (program) characteristics are good." All of our cherished principles of vocational education are not "old wives' tales." If one only scans those principles presented by Allen (1914), Prosser (1925), Wright (1926), Struck (1945), McCarthy (1950), and Roberts (1957), he will find that some of them are purely the results of logical inference, while some others have indeed been empirically validated. Needless to say, criteria for process evaluation, whether they be principles or theories, must be selected with great discretion.

HOW to JUDGE?

Exemplary issue: Subjective versus objective judgment

It is sometimes said that judgment is always subjective in nature, and subjectivity may lead to mistakes. The danger involved in subjective judgment can be greatly reduced if the event or phenomenon on which the judgment is made is described objectively. Let us refer back to the definition of evaluation. If to evaluate is "to examine and judge," then the question of subjectivity versus objectivity has at least as much to do with the examination stage of evaluation as with the judgment stage.

Some philosophers hold that we cannot describe anything without judging it in some respect (Randall and Buchler, 1942). That is to say, that there is always some subjectivity implicit in the act of examination. It is advisable for us to understand this point and be watchful of the data we collect for evaluation.

From the practical point of view, however, the danger of making an erroneous subjective judgment is far greater than making a subjective examination. In the judgment stage, the danger of making erroneous inference is greater than of making straight-forward conclusions. To illustrate, take, for example, a follow-up study of a sample vocational program. Suppose the placement data reveal that only fifty per cent of the graduates have been placed on the jobs for which they have been trained, and it is concluded that the placement rate is significantly lower than the national average of the same or similar programs. Such a conclusion, if made as a result of a statistical test,

cannot be labeled as a subjective judgment. If, however, inferences drawn for this conclusion assert that the low placement rate is solely due to lack of placement service in connection with the program, they will probably become subjects of dispute.

It is interesting to note that the pioneers of vocational education in this country struggled for objectivity in evaluation. In 1929, inspired by the function of the efficiency engineer in industry, Wright and Allen published a book, entitled Efficiency in Vocational Education, in which they developed methods "to ascertain in what ways the maximum social return can be given to the community for the time, energy and money expended for its educational program." They tried to, in every way possible, make an objective approach. But, realizing the difficulties in striving for objectivity, they seemed to conclude defensively that "While it is probably true that factual evidence is commonly accepted in a court of law, expert testimony is also accepted from a qualified expert, and it seems to the authors that the situation is very similar in the case of evaluating vocational education."

Up to today, the situation has not been improved much. It is exactly this problem of subjectivity in making judgments that has prompted scholarly criticism. The approaches proposed by these scholars, such as evaluating outcomes instead of program characteristics (Moss, NAEP), systems approach (Michigan State University (n.d.), also Starr, 1969) and systems analysis techniques (Robertson, 1969), still do not contribute to the solution of the problem on a scientific basis.

A Theoretical Base for Evaluation

A perfect evaluative model could be generated, if it were possible to develop "necessary and sufficient" criteria for program evaluation. To make this point clear, let us borrow examples from mathematics. For instance, the necessary and sufficient criterion for a circle on a plane surface is: if every point on a curve is equally distant from another point (not on the curve), then this curve is a circle, (and the other point is the center of the circle). Now, take the case of a square on a plane surface, which must have all of its four sides of equal length. This is a necessary criterion, but it is not sufficient, for a diamond-shaped figure can also satisfy this criterion. The necessary and sufficient criteria for a square

require not only that the sides be equal, but any angle between two adjacent sides must also be a right angle.

There are scholars who stress the importance of relevancy of data in evaluating an educational program (Stufflebeam, 1968). There are others who make content validity and reliability primary considerations (Baldwin, 1969). Though all of these are necessary conditions, they are not sufficient in judging programs. In other words, based only on relevant, valid, reliable data, one might take a diamond shape for a square.

Can we develop necessary and sufficient measurements for a vocational program? Unfortunately, the answer is NO -- not at least at the present stage of development in the behavioral sciences. The complex nature of the educational process makes it impossible to develop necessary and sufficient criteria for pinpointing success or failure of a program. However, the theoretical base is important from the standpoint that it may serve to caution the evaluator in designing his evaluation model and to guide him in interpreting findings. It also provides us with the vision that more research must be done toward achieving the theoretical base. For example, more studies must be made regarding correlations between specific program characteristics and program outcomes. The more we know about such correlations, the more intelligently we shall be able to figure out how to improve programs as a result of program evaluation.

In conclusion, evaluation today is far from an exact science. This conclusion, however, does not allow the luxury of delay or inaction in evaluation. Evaluation can serve many purposes, and the design of an evaluation must be predicated upon the purpose the evaluator holds. While careful design of an evaluation is important, careful interpretation of findings is equally important, if not more so.

Small Group Sessions

To insure that the Administrators' Workshop on Research and Evaluation would indeed be a workshop, a total of five small group sessions were planned. These were:

May 5 (P.M.) Brainstorming Session: "General Inhibitors to Research and Evaluation at the Local Level."

May 6 (A.M.) Small Workshop Groups: "Specific Deterrents to Research and Evaluation."

May 6 (P.M.) Small Workshop Groups: "Guidelines for Minimizing Deterrents to Local Research and Evaluation."

May 19 (P.M.) Small Workshop Groups: "Guidelines for Building Research and Evaluation into Local Practice."

May 20 (A.M.-P.M.) Small Workshop Groups: "Commitment to Specific Actions in Home School Districts."

Summary of Workshop A

First Session: May 5, 1970

Topic: "Brainstorming: General Deterrents to Research and Evaluation

One of the major deterrents to research and evaluation appears to be the problem of definition. It was suggested that research might be a "tool" for the objective analysis of alternatives. A second definition proposed research as the study of existing conditions, from which negative or positive results may be gleaned to aid in planning for change.

A popular concept holds research to be a complex process requiring the performance of many tedious tasks. Others look on research as a somewhat nebulous activity. According to some who spoke out in the Brainstorming Session, research has been restricted to a small group of specialists. Here it was suggested that there may be educators doing research who may not even be aware of it.

Another deterrent reported was a lack of resources. As administrators and teachers tend to think that research is tangent to their specific duties, time is not allowed in their schedules for this type of activity. This attitude produces a lack of financial commitment. Personnel, funds and facilities for research and evaluation are given low status in the hierarchy of priorities.

In terms of "psychological" deterrents, a fear was reported that evaluation implies personal criticism. Bureaucratic organizations, whether those of teacher or administrators, tend to approve a pattern of conforming behavior, thus perpetuating the status quo.

Other deterrents to local research and evaluation were given. These included the general attitude of teachers toward those interested in incorporating such activities and the lack of interest by members of the board or others in the community.

Summary of Workshop B

"Specific Deterrents to Research and Evaluation"

May 6, 1970

Five workshop groups generated lists of specific deterrents in the areas of state law and regulation, custom and tradition, administrative processes, boards, faculties, finances and the community. The results of these sessions are summarized in the following paragraphs.

Many of the deterrents derived from state laws and regulations refer to problems of information dissemination. It was said that directions are confusing and often do not reach the appropriate individuals in time. Also, some policies are inconsistent or not clear. For example, evaluations of rejected proposals may lack specific reasons for being turned down.

Deterrents to research and evaluation resulting from custom and tradition fall into two broad categories: those resulting from traditional ways of thinking; and those due to customary procedures. Included in the former situation is the lack of belief on the part of teachers that there is a need for research and evaluation by them. Traditionally, research is thought of as something too complex for regular school personnel. For many, research is an activity to be used by graduate students to fill degree requirements. It is not closely associated with local program implementation. Also cited by workshop participants is the failure of schools to have clearly defined purposes for courses and programs. Also lacking are guidelines for evaluation. A number of customary procedures were said to inhibit research and evaluation. Examples given were: poor communications between various levels of education and between types of education; planning from the top without involving teachers or users; failure to consider regional differences between rural and urban areas affected by programs.

When considering deterrents derived from administrative processes, workshop groups reported a lack of time, money, training, and communication. "Local teachers doing basic research are not recognized for their efforts. Administrators do not provide time for research in work schedules, and are more concerned with getting their prescribed jobs done than with vague activities like 'research.' When research and evaluation is being done, it tends to be delegated down the line to the

person least likely to be able to do it, or who lacks the authority or pay commensurate with his responsibility."

Lack of communication between administration and teachers concerning program planning, purpose and need for research and evaluation was frequently cited. "In developing school contracts, administrators often lack skill in providing for supportive activities, like research and evaluation."

Among the deterrents associated with boards of education are those stemming from negative attitudes toward research and evaluation. Examples given were lack of knowledge about research and evaluation; failure to understand the place and necessity of such supportive activities in the function of the school; fear that research and evaluation findings will uncover something detrimental to the board and community. The latter situation it was said, may lead to emphasis on specified and required services rather than supportive actions, and a hesitancy to allow "outsiders" to become involved in the schools.

Deterrents caused by administrative processes and boards are closely related to those connected with faculties. In terms of training, faculties may lack research skills or the ability to perform research coincident with classroom activity. Nor is an understanding of research and evaluation included in teacher training programs to a large extent. The school system itself includes deficiencies in relation to the fostering of research and evaluative activities. For example, student cooperation may be difficult to obtain, and classroom records are not being used systematically to generate data. Incentives and time considerations are not offered to faculty members to perform extra activities, hence, such activities burden the faculty. Lack of evaluative standards causes confusion; faculty members may think of evaluation in terms of rating for salary and promotion and thus fear that research and evaluation findings might threaten their positions.

Financial deterrents center on an obvious lack of financial commitment for research and evaluation. First of all, it is difficult to place a value on these activities. Allocations for evaluation, research, and development are not built into budgets. Research must be based on long-term financial support, but federal monies are provided on an annual basis; and, perhaps after evaluation, lack of funds may stop implementation of findings. The amount of money available for research and evaluation may be severly limited also by the breadth of the tax base, and inflation which may push research out of budgets entirely.

A final source of deterrents discussed in small group meeting is the community. Inhibitors reported here were a lack of, or negative, attitude toward education in general, or research and evaluation specifically; a failure to communicate with the educational system, a lack of pressure to force evaluation (a deterrent by ommission of action), failure to support research and evaluative activities monetarily. Academic education is usually given vocal support and priority over vocational education, therefore, vocational and general students have no group speaking for them.

Summary of Workshop C

"Guidelines for Minimizing Deterrents"

In these sessions, guidelines were generated for minimizing the deterrents to local implementation of research and evaluation which had been determined in previous workshop sessions.

To minimize legal deterrents two types of processes were suggested. The first involves simplification and standardization of existing structures to expedite dissemination of information. Directives should be clearly understandable, based upon a standard interpretation of policies and philosophies; methods of informing necessary personnel of due dates and funding possibilities could be developed, along with a procedure for allowing reasonable time for mandated reports and requiring a simpler format, and, guaranteeing feedback; labor legislation might be amended to permit flexibility in program development which would encourage research and evaluation in vocational education, and job placement for students.

The second process would build elements minimizing deterrents into the legal system. For example: "certification for teachers might be made to require courses designed to develop an awareness of research and evaluation and include basic necessary techniques; time would be incorporated into teaching schedules for research activities."

The reporting and dissemination of research and evaluation activities through such agencies as ERIC, State Research Coordinating Units and the AVA, and the incorporation of such activities into the training of teachers may aid in dispelling deterrents resulting from custom and tradition. Other possible guidelines in this area are the development of objectives for vocational teaching so that valid evaluation is possible.

Deterrents due to administrative processes may be affected by dispersion of responsibility. "A superintendent, principal, department chairman or supervisor designating persons to be involved in research and evaluation would help make these activities part of the educational system; state-local involvement of personnel should also be encouraged."

Lack of funds appears to be a prime deterrent. If local administrators gave a higher priority to research and evaluation, these activities could be integrated into planning and development budgets. A psychological aid to this move might

be the application of cost-benefit analysis to research and evaluation.

Concerning faculty deterrents, the main problem is one of attitude. To make faculties more aware of research and evaluation, and to dispel fears, perhaps reorientation, incentives, and additional formal training are necessary.

Problems presented by the community's negative attitude may be made less detrimental by fostering an appreciation and understanding of research and improving relations between schools and the community.

Summary of Workshop D

"Guidelines for Building Research and Evaluation into Local Practice"

General recommendations for incorporating research and evaluation components into local practice were generated in this session. They are summarized in the following paragraphs.

Introduction of research and evaluation discussion in administrative and faculty meetings would be a logical beginning. This could be followed by the designation of an administrative staff member and a staff steering committee to develop guidelines for building research and evaluation into the system. Gathering information regarding the present status of local research and evaluation activity, and examining what is occurring as action research in the school itself is recommended. Specific goals for future actions might then be set up. The cooperative efforts of teachers' associations, PTA's, local advisory committees, and students would help strengthen the process of implementation. Community involvement in research and evaluation in the school should be encouraged, and coordinated planning involving the state, local districts, and universities are desirable. In addition, materials concerning research and evaluation that comes into the central office should be disseminated.

To develop teacher interest in research and evaluation several incentives were suggested. These included extra-work, extra-pay contracts for work done in research and evaluation during the school year, salary increment credits for such efforts for local teachers, public or school recognition, and the exhibition of some projects done by teachers as examples of what can be accomplished. Other aids in developing teacher interest might be the incorporation of research and evaluation activities into the work load, thus providing legitimate time for planning, research, and evaluation in staff assignments.

The development of in-service institutes (possibly led by local colleges) and college credit courses may help professional personnel become more closely involved with research and evaluation thinking and action. Another way to provide for competence in research is to build a research course into their certification requirements.

A fundamental strategy for building research and evaluation into local practice would be to insure that all federal funding proposals include allocations for research and evaluation of the program being funded.

Summary of Workshop E

"Guidelines for Specific Action in Home School Districts"

The purpose of this workshop was the development of a specific plan of action by each participant that could be initiated during the next school year. To insure some consistency in proposal development, the following format was used (see Appendix K) :

1. Nature of the Local Research or Evaluation Activity

   A. Title

2. Brief Description: How it differs from present programs and what it may accomplish.

3. Objectives: Given in specific performance terms.

4. Procedures

   A. What will be done?

   B. Who will be in charge; who will be involved?

   C. What methods and materials will be used?

   D. How can the activity be built into the system?

   E. How will the activity be evaluated?

Summary of Workshop F

"Plan of Action for Home Districts"

In this session several plans of action were developed by participants which could be initiated in home districts. Summaries of these plans are given in the following paragraphs.

I - Basic Research and Evaluation Technique for Teachers.

This plan will introduce basic techniques of research and evaluation to teachers as those most intimately and immediately involved in class-room activity. Improvement in the quality of instruction, short-and long-term planning, and the development of evaluative instruments are the objectives of this program. Through the joint supervision of an administrator and staff, teachers would be trained in the basics of research and evaluation; methods proposed include lecturers, group sessions, and practice research, and the development of vocational programs and pilot projects. Teachers, as the target group, would be offered credit for participation, and efforts would be made to convince them of the necessity of their interest and cooperation for improving research and evaluation in vocational education. The evaluation of this plan may be made in terms of successfully funded programs, or in evidence of an increased emphasis on research, as well as the development of valid evaluative instruments.

II - Implementing Teacher Activity (Workroom).

Involved here are elements of the educational system which can provide time, instruction, and recognition for teachers involved in research having clearly defined educational objectives. Objectives of the program include the allocation of an area for faculty interaction, provisions for research materials, and administrative support of continuous and competitive research among faculty members with a view toward instruction improvement.

III - Provisions of Research Assistance to Local Districts.

A systematic program, initiated by the home school district, will call for the cooperation of State Education Department and University personnel in the development of plans, systems, and

services. The development of a continuing research effort and an integral evaluation component are objectives of this plan.

IV - In-Service Workshop Concerning Trade Program Courses in Terms of Behavioral Objectives.

To establish consistency and relevancy in all courses of study, and incorporate evaluative criteria in terms of observable behavior, as well as the coordination of similar or related courses throughout the system, are the objectives of this plan. Designated personnel employing general sessions and class-room activity would instruct educational staffs on the development and use of behavioral objectives for making curriculum revision.

V - Role of Advisory Committees.

The basic objective of this plan is the improvement of curricula, instructions and facilities through communications between industry and education. Vocational teachers and administrators will solicit individuals from business and industry, other educators, and graduates of vocational schools, to form committees to evaluate and recommend actions for the improvement of education. The advisory committee function can be built into the system through in-school meetings and field training. Evaluation of the role of advisory committees would be made in terms of such items as communications, curriculum change, graduate employment, placement data, and the development of evaluative tools.

VI - Career Information Related to Academic Discipline.

The object of this proposal is to establish plans for coupling general education and career orientation. A committee of career consultants, teachers, and students will determine objectives and develop course outlines. The career orientation activity could be built into the system by way of a unit in the curriculum. This unit would include such elements as group discussions, fild trips, guest speakers, and supervised occupational experiences. An experimental evaluation of the program could be made through the use of pre-and post-tests of treatment and control groups.

VII - Identification of Occupational Choices and Goals Integrated Into Educational Program.

A study of a ninth-grade student's career goals would be made to evaluate how effectively he had been counseled and educated. Such a study should help in the identification of priorities and strategies for improving the career guidance program for junior high students.

VIII - Follow-Up Study of Graduates in Vocational Education.

Through contact with graduates and employers, this plan would determine how effectively courses and programs now being offered were in the preparation of students for gainful employment.

IX - Food Service Curriculum.

According to this plan, students, instructors, employers, and advisory committees would collaborate to assess the need for new course offerings and to ascertain needed revisions in existing curriculums.

X - Evaluate Effectiveness of Background Music.

This experimental plan involves the installation of a background music system in one or more vocational classes. The basic objective is to ascertain whether or not the use of background music is feasible instruction. To bring the activity into the system, funds and administrative support must be gained.

XI - Recording Tasks in First-Year Auto Mechanics and Electronics.

By making students and teachers aware of individual student's progress through a charting and recording method, several desirable objectives could be attained. Such a system would expose teachers and students to performance objectives, improve courses of study by stressing measurable behavior, and provide a model for charting and recording tasks in other skill areas. Examination of student motivation and achievement, and changes in course content would provide ground for evaluation.

XII - County-Coordinated Evening Adult Education.

This plan would coordinate a total program of education for adults in evening schools using all county educational resources. A supervisor of adult education for the county would be appointed, and in connection with various individual boards, teachers, and councils, would use surveys, conferences, and existing structures to promote and initiate an adult education program.

Summary and Recommendations

When reviewing the overall State Coordinated Plan for Building Research and Evaluation into Local Practice, the specific objectives of the Administrators' Workshop, its six major presentations, and the materials generated by small workshop groups, it may be said that an important beginning has been accomplished.

Taking into consideration the fact that the May 1970 workshop was intended to be the first component in an integrated long-range plan, it was reassuring to find a general enthusiasm for the ideas thus far developed, and for the sequence of events planned for the years ahead.

Among the more tangible results of the workshop was the preparation of a dozen plans of action for research and evaluation in local districts. This initial step toward action research, it is hoped, will be greatly expanded during the 1970-71 school year when the main theme of 5 regional workshops will be to generate local commitments to research and evaluation in vocational-technical education.

Following are a number of summary statements that have been gleaned from the Administrators' Workshop. These are not to be thought of as "findings" in a research sense; rather, they are representative of ideas, opinions and areas of agreement that were discussed.

Summary Statements

1. "In education, the lag between the acquisition of research-based knowledge and legitimate change may have been tolerable in times past; but now, in a period when the burgeoning problems of school and society grow faster than solutions, such a situation can no longer endure." (Law)

2. "Evaluation must be built into all vocational education and manpower training programs when they are designed." (Worthington)

3. "National Goals for Vocational Education, as recently given by the U. S. Office of Education are:

    A. Development of a comprehensive educational system insuring that everyone can be prepared for satisfactory employment.

B. Improvement in the quality of vocational education, and getting it back into the mainstream of education.

C. Establishment of priorities which give special attention to the disadvantaged.

D. Holding the schools responsible for every students success in the future.

E. The preparation of highly specialized manpower supportive personnel to meet critical labor shortages in technical fields.

F. "The development of a national manpower policy." (Worthington)

4. "To affect program change in vocational education, more comprehensive federal, state,and local evaluation systems are necessary." (O'Connor)

5. "Personal involvement is necessary if research is to be meaningful." (Toft)

6. "There is a need for small-scale, on-the-scene, developmental research, making use of trial and error methods. In education, there does not appear to be any group doing this kind of research." (Landauer)

7. "Both the process and the product of vocational instruction must be considered when making an evaluation. Taken alone, each is incomplete. If only the product is used, the results might have come from condition or factor other than the student's educational experience. On the other hand, if only the process is measured, there is danger that obsolescent skills may be taught in an excellent style." (Po Yen Koo)

8. "It is necessary to acknowledge that all of us are likely to place the blame for what we do not accomplish on some other person or institution; all of us are slow to recognize that one of the prime deterrents to change resides in our own actions and attitudes." (Law)

9. "Local programs of research and evaluation -- the basic ingredients for legitimate change -- are feasible, as soon as they are given a high rank in the order of priorities." (Workshops)

10. "Deterrents to legitimate change in vocational education are to be found in law and regulation, custom and tradition, administrative processes, Board of Education policies and actions, faculties, finances, and forces in the community." (Workshops)

Recommended Actions For College And State Departments And Local Districts

A review of all the deterrents to research and evaluation reported at the Workshop indicates that some were not essentially local problems. It was proposed that certain regulations and practices of the State Department of Education and those of colleges and universities could also inhibit the implementation of change. Here it was recommended that departments of vocational education, whether in university or state office, need to develop more sensitive feedback mechanisms, allowing them to provide needed services with more dispatch.

Mainly through small group process, the Administrators' Workshop generated a number of specific actions for Building Research and Evaluation into practice. Derived from this phase of the Workshop are the following recommendations:

1. Place an evaluation component in all proposals for state/federal funds.

2. Incorporate research components in all instructional plans; do not concentrate all funds for research in one line item that may be eliminated when budget cuts are made.

3. Designate a person or persons responsible for research and for evaluation in the school and in the district.

4. Provide time in teachers' assignments for research and evaluation.

5. Working cooperatively with faculty and staff, establish priorities and strategies for research and evaluation.

6. Set specific performance goals for various instructional programs -- and for the administrative process.

7. Develop a continuing system of evaluation for the system.

8. Use evaluation to identify research questions and use research methods to design and carry out evaluation.

9. Seek the assistance of State Education Department and University personnel.

10. Incorporate research and evaluation topics into administrative staff meeting agendas.

New Jersey State Coordinated Plan:

Proposal for 1971 -- Research; Regional Conferences

To follow up on the ideas generated at the May 1970 Administrators' Workshop, two activities are planned for the 1970-71 school year. The first of these is a research project to study The Change Process in Vocational-Technical Education: Critical Elements Which Inhibit or Favor the Initiation of Research and Evaluation Activities in Local Practice. The second major element in the State Coordinated Plan will be a series of 5 Regional Workshops in which the generation of local commitments to research and evaluation will be a prime objective.

The proposed research project will seek to catalog those factors which tend to inhibit the implementation of local research and evaluation activities, as viewed by teachers, general school and vocational education administrators, school board members, and other groups directly or indirectly involved in education. Also, the study will attempt to identify general and specific countermeasures for minimizing the effect of inhibiting factors. It is planned that this exploratory work will provide a frame of reference for subsequent experimental studies all dealing with the concept of change.

The five Regional Conferences planned for 1970-71 will be designed to insure that active school administrators are the ones who will decide how research and evaluation components can be built into their systems. Here, it is planned that ideas for program implementation will be generated in advance of workshop sessions. Then, through small-group process, persons attending the workshops will critique each proposal. A result of this process, it is hoped, will be the generation of specific workable plans of action, for incorporating permanent research and evaluation components into local school systems.

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APPENDIX A

INVITATION LETTER

RUTGERS UNIVERSITY *The State University of New Jersey*

GRADUATE SCHOOL OF EDUCATION
Department of Vocational-Technical Education
New Brunswick, New Jersey 08903
Tel. 201-247-7636, 247-1766 Ext. 6937

Administrator's Workshop for Research and
Evaluation in Vocational-Technical Education

Dear

You are invited to attend a series of workshops for school administrators at the New Jersey Residential Manpower Center at Camp Kilmer in Edison on the following dates:

May 5th - Evening 6:30 - 10:00 P.M. - May 19th
May 6th - All Day 8:30 - 4:00 P.M. - May 20th

These sessions, conducted by the Rutgers University Department of Vocational-Technical Education, are sponsored by the New Jersey State Education Department.

As the major purpose of the workshop is to develop guidelines for vocational research and evaluation at the local administrative level, it is desirable that each participant attend all four sessions to provide a continuity of thought and action. An important, but not exclusive, element in the forthcoming workshop is its relationship to the New Jersey State Education Department's stress on the preparation of long-range planning in vocational education. A valuable benefit of participation, then, should be the cooperative development of priorities, goals and commitments for vocational education that would be useful in the preparation of formal proposals for state-federal support of vocational programs.

We have enclosed an outline of the program, a map to the Center, and a post card registration form. Will you please indicate on the post card the administrator who will attend the workshop and mail it by April 23rd. Additional workshop information will be mailed to him.

Sincerely,

Prof. Gordon F. Law
Program Director

GFL:bfc

R U T G E R S U N I V E R S I T Y

Administrator's Workshop For Research and Evaluation in Vocational Education

General Information

What: Four workshop sessions for the purpose of developing guidelines for vocational research and evaluation at the local administrative level. This represents the first phase of a five-year state coordinated plan.

The Objectives of the workshop are:

1. To consider conditions and practices in educational operations which inhibit the use of research and evaluation, or the initiation of research and evaluation practices on the local education level.

2. To identify specific deterrents to research and evaluation in various educational settings and institutions.

3. To develop guidelines for change - for minimizing the effect of deterrents to local implementation of research and evaluation in vocational education.

4. To develop guidelines for long-range planning and for immediate action at state and local settings.

5. To develop guidelines for research at the local level.

When:

Tuesday	May 5th	6:30 - 10:00 P.M.
Wednesday	May 6th	8:30 - 4:00 P.M.
Tuesday	May 19th	6:30 - 10:00 P.M.
Wednesday	May 20th	8:30 - 4:00 P.M.

Where:

New Jersey Residential Manpower Center
Plainfield Avenue
Edison, New Jersey

Motels:

For those participants who expect to stay over, there are numerous motels in the immediate area. Howard Johnson's, Holiday Inn and Quality Courts are in New Brunswick. Please make your own arrangements.

For Whom:

School administrators with responsibilities for vocational education.

Sponsor:

These workshops are conducted by the Department of Vocational-Technical Education of Rutgers University. Financial support is through the New Jersey State Department of Education.

Workshop Staff

Director:

Professor Gordon F. Law of the Rutgers University Department of Vocational-Technical Education. Dr. Law has extensive experience in vocational education at the local scene, as a teacher of trade and related subjects, coordinator of cooperative education and technical college instructor. He has had over ten years' experience in administration of vocational education in New York State, both in comprehensive high schools and as administrator of area BOCES schools in Suffolk County.

Workshop Planning Committee:

Mrs. Dorothy Anderson - Jersey City State College
Mr. John Cummings - New Jersey State Education Department
Mr. Rudolph Girandola - New Jersey State Education Department
Mr. Joseph McNeill - Research Asst., Rutgers University
Mr. Robert Noguera - Red Bank High School
Mr. Robert Pecka - New York Telephone Company
Dr. Po Yen Koo - New Jersey State Education Department
Mr. Robert Toft - Superintendent of Vocational Education, Cape May County

Costs to Participants:

There will be no charge for registration or participation in the workshop.

Luncheon will be prepared by the Manpower Center on May 6 and May 20. Participants will be expected to pay for these luncheons at $1.50 each.

Workshop Registration:

Persons planning to attend will please mail the post card registration form by April 15th. Further workshop instructions will then be mailed to each.

Content of Program:

May 5th - 6:30 - 10:00 P.M. - May 19th.
May 6th - 8:30 A.M. to 4:00 P.M. - May 20th.

APPENDIX B

CONFIRMATION LETTER

RUTGERS UNIVERSITY *The State University of New Jersey*

GRADUATE SCHOOL OF EDUCATION
Department of Vocational-Technical Education
New Brunswick, New Jersey 08903
Tel. 201-247-7636, 247-1766 Ext. 6937

April 22, 1970

Dear

I am happy to know that you will be taking part in the Administrator's Workshop on Research and Evaluation on May 5-6 and May 19-20 at the New Jersey Residential Manpower Center, Edison, New Jersey.

An important objective of the workshop is to help generate specific commitments for local actions in research and evaluation--actions that could be initiated as early as the 1970-71 school year.

With this aim of working toward specific commitments in mind, will you please come to the workshop prepared to think about definite plans of action for research and evaluation that might be initiated in your district.

These plans, I would think, need not be especially ambitious or dramatic at the outset. After all, it may be loo late in the year to consider any research and evaluation efforts for 1970-1971 that would require considerable financial outlay or reorganization of staff assignments.

The following list of actions are offered merely as suggestions. I am sure you can think of other research and evaluation activities that would be more appropriate for implementation in your district:

1. The incorporation of research and evaluation discussion into meetings of administrative staff members, and in school faculty meetings.

2. The identification of an administrative staff member to develop plans for incorporating research or evaluation or both into the system.

3. Appointment of a staff steering committee to develop guidelines for building research and evaluation into the system.

4. Providing time for planning, research, and evaluation into staff assignments.

5. Developing lists of unanswered questions relating to such elements of school work as: the curriculum, the teaching process, allocation of student's time, student selection, the guidance and placement function, and various management tasks that are in need of analysis and evaluation.

6. Developing a plan for research and evaluation for the years ahead, setting forth specific performance goals for FY 72, FY 73, etc.

7. Making plans for the development of in-service institutes to help professional personnel become more closely involved in research and evaluation thinking and action.

The preliminary workshop program and map are enclosed to help you in your planning.

I am looking forward to meeting with you on May 5.

Sincerely,

Gordon F. Law
Associate Professor of Education

GFL:cu

Enclosures

APPENDIX C

ADMINISTRATION WORKSHOP PROGRAM

ADMINISTRATORS' WORKSHOP PROGRAM

Tuesday evening - May 5

6:30-7:00 p.m.	Registration and coffee.
7:00-7:45	General Session: Introductions, Keynote Presentation "Research and Evaluation in Local Schools" Gordon Law.
7:45-8:10	General Session: Workshop Objectives and Procedures, and Small Group Organization, Joseph McNeill.
8:10-9:30	Small Group Meetings - "Brainstorming: General Inhibitors to Research and Evaluation at the Local Level."
9:30-10:00	Brief Feedback Reports.

Wednesday - May 6

9:00-9:30 a.m.	General Session - "Priorities for Research and Evaluation." Dr. Robert Worthington, New Jersey State Director of Vocational Education.
9:30-10:00	General Session - Federal State Guidelines for Vocational Education. Mr. Charles O'Connor, Director of Adult Vocational Education, U.S. Office of Education, Region II.
10:00-10:20	Break
10:20-10:30	General Session: Directions to Workshop Groups, Joseph McNeill.
10:30-12:00	Small Workshop Groups, "Specific Deterrents to Research and Evaluation."
12:00-12:50	General Session Feedback Reports.
1:00-2:00	Lunch: Residential Manpower Center Cafeteria.
2:00-2:15	General Session - Progress Report; Directions to Workshop Groups. Joseph McNeill.
2:15-3:30	Small Workshop Groups - Guidelines for Minimizing Deterrents to Local Research and Evaluation.
3:30-3:45	Break
3:45-4:15	General Session - Brief Feedbacks: Gordon Law.
4:15	Adjornment until 6:30 p.m., May 19.

Tuesday evening - May 19

6:30-6:45	Coffee

Tuesday evening - May 19

6:45-7:00	General Session - Review of Workshop Activities on May 5,6 - Gordon Law.
7:00-7:30	General Session - "How a County Superintendent of Vocational Education Views Research and Evaluation", Robert Toft, Superintendent of Vocational Education, Cape May County.
7:30-7:45	General Session - Instructions to Workshop Groups, Joseph McNeill.
7:45-9:15	Small Workshop Groups - Guidelines for Building Research and Evaluation in Local Practice.
9:15-10:00	Feedback Reports.

Wednesday - May 20

9:00-9:30	General Session - "Evaluation, Supported by Research in Vocational-Technical Education", Dr. Po Yen Koo, Research Coordinating Unit, New Jersey State Education Department.
9:30-10:20	General Session - "Research and Development in Industry". Robert Pecka. American Telephone and Telegraph. Thomas Landauer, Bell Laboratories.
10:20-10:40	Break
10:40-12:00	Small Workshop Groups - Guidelines for Specific Actions in Home School Districts.
12:00-12:15	General Session - Feedback Reports.
1:00-2:00	Lunch: Residential Manpower Center Cafeteria.
2:00-3:30	General Session - • Review of Workshop Objectives and Specific Commitments - Evaluation Questionnaire. • Guidelines for Workshop to be held in Fall of 1970. • Guideline for Proposed Research Activities. • Guidelines for Proposed Pilot and Demonstration Projects.
3:30-4:00	Discussion and Adjournment.

APPENDIX D

INTERIM PROGRAM REPORT

RUTGERS UNIVERSITY

Department of Vocational-Technical Education

Date: May 11, 1970

To: School Administrators with Interests in Vocational-Technical Education.

From: Professor Gordon Law, Project Director - Administrators' Workshop on Building Research and Evaluation in Local Vocational Education Practice.

Subject: Interim Progress Report - Administrators' Workshop - First Phase

Following is a brief summary of the Workshop activities of May 5th and 6th, held at the Residential Manpower Center in Edison.

Please note in your calendar that the second phase of this workshop will continue Tuesday Evening, May 19, at 7:00 P.M. and all day Wednesday, May 20, again at the Residential Manpower Center. Attendance at the first session is not a prerequisite to your participation in the second phase of the Workshop.

May 5, 1970

In introductory statements by Gordon Law of Rutgers University, the main purpose of the Workshop was given. This was to take an initial step in a five-year project to build research and evaluation components into local practice.

Workshop coordinator, Joseph McNeill of the State University of New York Maritime College prepared workshop participants for a number of small group "brainstorming" sessions in which the various deterrents to local research and evaluation were listed.

May 6, 1970

The opening session of the day was highlighted by presentations by Dr. Robert Worthington, Assistant Commissioner for Vocational Education, New Jersey State Education Department, and Charles O'Connor, Director, Bureau of Adult Vocational-Technical Education, Region II, United States Office of Education.

Dr. Worthington, speaking of the federal-state role in vocational-

technical education, gave particular attention to research priorities currently being developed and to the growing stress on evaluation as an integral component in program planning. In response to a question about funds for evaluation, he suggested that proposals for state-federal funds should contain appropriate budget items for evaluation.

A most important news item was given by Mr. O'Connor. When reporting the most recent information regarding federal vocational education funds for New Jersey, he indicated that fiscal - 70 funds could be expended by local districts over a two-year period, which would extend through 1971.

Small Group Workshop Sessions identified and discussed a number of specific deterrents to local research and evaluation. They also began to work out guidelines for minimizing these deterrents. Among the deterrents to research and evaluation discussed were those derived from <u>laws and regulations</u>; those resulting from <u>custom and tradition</u> and from <u>administrative practices</u>, <u>financial deficiencies</u>, <u>the faculty</u>, <u>the board</u>, <u>the community</u> and others.

At the next phase of the Workshop on May 19 and 20, Workshop groups will review a tabulation of the deterrents to local research and evaluation, and the guidelines for minimizing them.

The focus of Workshop activities will then turn to the development of <u>specific plans of action</u> that may be initiated in local and county school districts.

This should be a most interesting session, one which would certainly be practical for anyone who will be preparing proposals for vocational education funding. If you were unable to attend the May 5 and 6 Workshop sessions, you could still make an important contribution on May 19, 20.

I am looking forward to working with you at that time.

Dr. Gordon F. Law

APPENDIX E

CONSULTANTS AND RESEARCH PEOPLE

"E"

Listing of:

Consultants and Resource People

Mrs. Dorothy Anderson - Jersey City State College

Mr. John Cummings - New Jersey Residential Manpower Center

Mr. Rudolph Girandola - New Jersey State Department of Education

Dr. Thomas Landauer - Bell Laboratories

Dr. Gordon Law - Rutgers University

Mr. Joseph McNeill - State University of New York, Maritime College

Mr. Robert Nogueira - Red Bank High School

Mr. Charles O'Connor - United States Office of Education

Mr. Robert Pecka - American Telephone and Telegraph Company

Dr. Po Yen Koo - New Jersey State Department of Education

Mr. Robert Toft - Superintendent, Cape May Vocational High School

Dr. Robert Worthington - New Jersey State Director of Vocational Education

APPENDIX F

LIST OF PARTICIPANTS

Appendix F

Listing of Participants

Dorothy Anderson	Jersey City State College Jersey City, New Jersey
Walter E. Billiet	Division of Vocational Education Trenton, New Jersey
C. H. Buzzell	813 Davidson Road Piscataway, New Jersey
Thomas F. Cardea	Camden County Vocational-Technical 6008 Browning Road Pennsauken, New Jersey 08104
J. N. Casello	816 Davidson Road Piscataway Road Piscataway, New Jersey
F. Chervenak	Essex County Vocational Schools 90 Washington Street East Orange, New Jersey
Darrell Cole	Scope Center Douglass College, New Brunswick, New Jersey
August J. Colo	49 Foxwood Drive Somerset, New Jersey 08823
Myron Corman	54-A Stonehurst Boulevard Freehold, New Jersey 07728
John M. Cummings	New Jersey Residential Manpower Center Edison, New Jersey
Obadiah Craig	Rutgers University New Brunswick, New Jersey
Joseph W. English	249 Crystal Lake, Audobon, New Jersey
Bruce Folena	Passaic County Technical and Vocational Area School Summer and Ellison Streets Paterson, New Jersey

Maxwell Frielich	6-14 Third Street Fair Lawn, New Jersey 07410
Rudolph Girandola	New Jersey Department of Education Trenton, New Jersey
T. A. Glasgow	Rutgers University College New Brunswick, New Jersey
John T. Gress	Somerset County Vocational-Technical High School Somerville, New Jersey 08876
Stanley Grossman	Union County Regional High School District Mountain Avenue Springfield, New Jersey 07081
Joseph G. Hausmann	Passaic County Technical and Vocational High School Paterson, New Jersey
Seymour Hertzson	Toms River Schools Toms River, New Jersey 08722
Ed Hirschman	Rahway Board of Education Rahway, New Jersey
Elaine W. House	Rutgers University New Brunswick, New Jersey
Warren Jochem	Hunterdon Central Area Vocational-Technical Schools
Jiin Rong Ko	332 Cooper Lane Piscataway, New Jersey 08854
Po Yen Koo	State Department of Education Trenton, New Jersey (Vo.-Tech.)
Gordon F. Law	Rutgers Universtiy New Brunswick, New Jersey
M. Margules	D.V.E., New Jersey State Department of Education Trenton, New Jersey

J. G. McNeill	716 Taft Avenue North Plainfield, New Jersey 07063
Kenneth E. Miller	Trenton Skill Center 942 Prospect Street Trenton, New Jersey
R. Paul Muni	Asst. Supt., Dover Public Schools Grace Street Dover, New Jersey 07801
Roger Nathan	250 Howard Avenue Woodstown, New Jersey 08098
Robert Noguera	Red Bank High Schools Red Bank, New Jersey
Bernard Novick	Woodbridge Township Public Schools Woodbridge, New Jersey
Charles O'Connor	26 Federal Plaza New York, New York
George O'Connor	Essex County Vocational Schools 90 Washington Street East Orange, New Jersey
Doyle E. Owens, Jr.	Cumberland County Vocational- Technical Center
J. N. Parris	Lower Camden Regional High School Camden, New Jersey
Robert Pecka	American Telephone and Telegraph Company
Fred Porges	Middlesex County Vocational- Technical Schools
Mary Quigley	New Jersey Residential Manpower Center Edison, New Jersey
Carl J. Schaefer	Rutgers University New Brunswick, New Jersey
Melvin Spencer	Rutgers University New Brunswick, New Jersey

J. Stahl	26 Federal Plaza New York, New York
Robert Toft	Cape May County Vocational-Technical School Cape May, New Jersey
Benjamin Verdile	Rutgers University New Brunswick, New Jersey
W. D. Walker	Trenton, New Jersey
Neal F. Warrington	Dag Hammarskjold College 2017 Que Street Washington, D. C.
Everett Warzecha	Rutgers University New Brunswick, N. J.
Ray Wasdyke	Trenton State College Trenton, New Jersey
Robert Worthington	State Department of Education Trenton, New Jersey
Henry Zanzalari	Superintendent, Somerset County Vocational-Technical Schools Somerset, New Jersey
Adrian Van Zweden	Wayne Board of Education 50 Nellis Drive Wayne, New Jersey 07470

APPENDIX G

DETERRENTS TO RESEARCH AND EVALUATION

Appendix G

Workshop B

Deterrents to Research and Evaluation
Summary of Administrator's Workshop Activities

May 6, 1970

Workshop Leaders directed the discussion to specific deterrents in the areas of state law and regulation, custom and tradition, administrative process, finances, faculty, The Board, and the community. The results are summarys as follows:

A - Deterrents Derived from State Practices, Laws and Regulations.

1. Directions are confusing and complicated.

2. Information is misdirected. Key people don't get involved until it's too late.

3. Inconsistent state policies and philosophy, and too many changes in direction and timing.

4. They deter future potential.

5. Current labor legislation may inhibit total R and E program development.

6. Evaluation of pilot programs lacked feedback which affects locals on accreditation.

7. There is no state law or regulation requiring feedback to locals.

8. Evaluation of rejected proposals lacks specific references (in-service response semi-structured).

9. Outline form for self-evaluation may be disfunctional for local program.

10. Lack of staff for program evaluation in local area.

11. System of submission through county office is disfunctional. (Local may not support proposal or may not evaluate local needs).

12. Time constraints imposed by legislation (2 year submission, PPBS innovation).

13. Time lapse between receipt of federal/state legislation and dissemination at local level.

14. Public law 303: teacher's contract limits teacher's time.

15. The specificity of federal guidelines may be confining.

B - Deterrents Resulting from Custom and Tradition.

1. Traditionally, educators are not accustomed to the concept of a need for research and evaluation by them.

2. Customarily, vocational teachers are not educated with a view toward conducting research and evaluation.

3. There are no real guidelines which help us know how to assess what we find, i.e., what is success.

4. Traditionally, research per se is too complicated for many people to handle.

5. There is unclear thinking about the real purpose and function of particular courses, programs, and institutions.

6. For the sake of expediency, we lean toward what we know from experience without taking time to evaluate before deciding what to do. Use of seat-of-the-pants intuition prevails.

7. Function relationship lacking between public and vocational school.

8. Regional differences between rural/urban areas affecting programs.

9. Planning from top down rather than local implementation.

10. Growth of program has surpassed local implementation.

11. Evaluation follows action rather than preplanning research.

12. Lack of use from results of local research.

13. Research is customarily used by graduate students to fill degree requirements rather than for local program improvement.

14. Poor communications between various levels of education.

15. Tenure tends to discourage extra effort which generally includes R and E.

16. Traditional attitude - image of vocational education discourages implementation of R and E.

17. Custom and tradition of present guidance practices are not conducive to vocational R and E in guidance.

18. Educators get in a rut and it is difficult to get them out.

C - <u>Deterrents Associated with Administrative Processes</u>

1. Research tends to be delegated down the line to the person least likely to be able to do it.

2. Classroom teacher is not involved in planning to great extent.

3. Programs lack specific directives for evaluation to specific items or topic.

4. Administrators lack skill in developing school contracts which provide for supportive services.

5. Staff positions filled by moving up through system, leaving area of expertise to attain greater financial reward (Peter Principal).

6. Research has been recognized as relevant by its complex structure; the local teacher who does basic research is not recognized for his limited efforts.

7. Research is not recognized by higher administrators as a time-consuming process. No provision in work schedule is made for this.

8. Administrators are more concerned with getting their job done than with esoteric things like research.

9. A general lack of time, money, and training to do the job.

10. Position of person assigned curriculum evaluation or research responsibilities often does not have the authority, or pay commensurate with responsibility.

11. Lack of communication between administration and teacher concerning the purpose of research.

12. Administrative inflexibility:
    1. Curriculum.
    2. Convention seminar work.
    3. Individual visits, advisory comment with teachers.

13. Administrators may be "handcuffed" with existing non-research-minded staff.

14. Lack of dissemination of materials in time to be of practical use.

15. Failure to communicate to the Board the need for research and evaluation.

D - <u>Financial Deterrents</u>

1. Funds are not built in for evaluations.

2. Budget money is allocated for programs rather than basic research and development.

3. Lack of priorities for research.

4. Research is not considered "productive" as is teaching.

5. It is difficult to put a dollar value on research.

6. Lack of long-term financial commitment which good research demands. Federal monies are provided only on an annual basis.

7. Breadth of tax base may severely limit monies available.

8. Inflation is pricing research out of the budgets.

9. Generally in sufficient managing budget.

10. Lack of funds may stop implementation of research findings after evaluation suggested.

E - Faculty

1. Training institutions lack behavioral objectives for evaluating teacher performance without required traditional course work subject to interest.

2. Lack of standards for evaluation.

3. Time considerations for research are reflected in staff needs.

4. Classroom records are not being utilized in systematic manner to generate data.

5. Faculty may lack skills in research.

6. Union considerations may deter research.

7. Research and evaluation felt to be threatening because of the possibility of research findings threatening his position.

8. Difficulties in performing the mechanics of research the same time as classroom activity.

9. Feeling that research findings will not be communicated or used so why start.

10. Problem of student cooperation in a research activity opposed to doing regular shop work.

11. Feeling of insecurity and threat from self-evaluation.

12. Faculties in general resent any outside person evaluating their work, even if they can't do it themselves. The "clinical" approach is resented.

13. "under trained" - "over wise."

14. Time and effort - existing negotiation procedures require money.

15. Not enough recognition (money, etc.) for extra effort and duty.

16. Additional burden on faculty load.

17. Lack of incentive to perform (tenure).

18. Lack of understanding - not in teacher preparation.

F - Boards

1. Financial considerations have limited research. Emphasis placed on "required services" rather than supportive activities.

2. Follow-up reports not effectively presented.

3. Board not clear of schools' primary function.

4. Many people of the community feel powerless to effect any change.

5. General distrust of where the money goes in education; distrust of ethereal items like "research".

6. Politically-influenced board members may choose "tax savings" as a deterrent.

7. Negative board members' attitudes concerning regionalization, with large schools more adaptable for R and E.

8. Too often, not knowledgeable about research and evaluation needs.

9. If not made aware of needs by Superintendent, they will not be amenable to the concept.

10. General lack of interest. What they don't worry about, they don't push for.

11. Failure to support proposals.

12. Possibility of research and evaluation finding something is not right and thus reflect upon the board and the community.

13. Hesitancy on part of board to allow outside people to become involved or come into the schools.

14. Financial and political considerations - election years composition of board may be unfavorable to certain projects.

15. No support $ - competing dollar priorities.

G - Community

1. Lack of support, attitude, interest.
2. Negative view to all education.
3. Apathy on the part of the community.
4. Failure of a segment of the community to exert pressure (deterrent by omission of action).
5. Lack of pressure to force evaluation.
6. General and Vocational students have no pressure group speaking for them.
7. Academic program has most vocal support.
8. Community attitudes may be pro or con in terms of their students involved in vocational education.
9. No support $ - competing values.
10. Mistrust - unless confirms own feelings.
11. Lack of communication.

H - Other

1. Threat to human rights - privacy.
2. Climate to promote research is absent.
3. The community does not see research as part of schoolwork.
4. Outcomes as relevant to every day problems.
5. Carnegie units - for high school graduation.

APPENDIX H

GUIDELINE FOR MINIMIZING DETERRENTS

Appendix H

Workshop C

Guidelines for Minimizing Deterrents
Summary of Administrators' Workshop Activities

May 6, 1970

Guidelines for Minimizing Deterrents

The purpose of this session was to generate guidelines for minimizing the deterrents to local implementation of research and evaluation which had been identified in previous workshop sessions. A summary of these guidelines follow:

A - Guidelines for Minimizing Legal Deterrents

1. Express directives in clear and concise and simple language; develop samples and models; tell what not to do or say.

2. To better direct information, indicate forwarding address or person for expediting delegation for action.

3. Develop a systematic method for informing local directors and supervisors of due dates and funding possibilities.

4. Standardize interpretations of policies and philosophies.

5. Include courses for certification that have basic research techniques included, e.g., Job Analysis.

6. Amend existing labor legislation to permit flexibility in program development which will then encourage R and E in vocational education, and job placement of students.

7. Seek support from teachers' union.

8. Build into the schedule and contract release time, half days, etc., for workshop.

9. Establish a reasonable lead time and a simplified format for the mandated reports with less duplication of material.

10. An abstract could be presented for immediate reply or feedback.

11. Build into the law a required feedback on proposals (within a reasonable time).

12. Incorporate into the certification process a sensitivity and/or ability in research and evaluation.

13. Reorientation - series of in-service workshops conducted by an outside agency - required by the commissioner.

B - <u>Guidelines for Minimizing Deterrents Resulting from Custom and Tradition.</u>

1. Recommend that AVA promote research and evaluation activities. Literature should be directed to non-members as well as members.

2. Incorporate research and evaluation component into professional training of teachers.

3. Re-evaluate criteria for certification requirements.

4. Develop objectives for vocational teaching, so that valid evaluation can take place.

5. Limit "paper work".

6. Institute PPBS system at state level.

C - <u>Guidelines for Minimizing Deterrents Associated with Administrative Processes.</u>

1. Identify the research resources available to each local educational effort.

2. Develop means for disseminating research throughout the field.

3. More involvement of state-level people with local district personnel.

4. Implementation is probably best done through the department chairman or supervisor.

5. Require that someone's function include the responsibility of research and evaluation, and that some form of ratio

be worked out for the number of people involved for such and such a size system (similar to that which exists in special education).

6. Administrators share their job responsibilities to encourage research and evaluation - this becomes a broader training program for teaching staff.

D - Problems Associated with Financial Deterrents

1. Find some way to better sell cost-benefit value of research and evaluation.

2. Improve the cooperation between the local agencies and the University in terms of proposing and researching local techniques, systems, and other specifics.

3. Have local administration identify problems on a priority basis.

4. Structure budgets to include integrated planning, development, evaluation programs so that money is not readily and easily identified only as research.

E - Problems Associated with the Faculty

1. Involvement and reorientation should be directed toward changing attitudes, creating an appreciation of research and eliminating fears.

2. Have more in-service training.

3. Provide rewards for interest and success.

F - Problems Associated with the Community

1. Improve public relations between school and community.

2. Conduct programs which will foster appreciation and understanding of research by an outside person with an expertise in research and evaluation.

3. State-wide visibility of research and evaluation.

APPENDIX I

GUIDELINE FOR BUILDING RESEARCH AND EVALUATION INTO LOCAL PRACTICE

Appendix I

Workshop D

Guidelines for Building Research and Evaluation into Local Practice

This was the workshop session for presenting general ideas for building research and evaluation components into local practice. Using the following list to open discussion, the workshop leader planned to come out of this session with a refined list of recommendations for action at the local level. These recommendations should have the general acceptance of the group.

The following list of actions is given as suggestions -- a number of other ideas were generated through workshop action:

Guidelines for Building Research and Evaluation into Local Practice

1. Incorporate research and evaluation discussion into meetings of administrative staff members, and into school faculty meetings.

2. Designate an administrative staff member to develop plans for incorporating research or evaluation, or both, into the system.

3. Appoint a staff steering committee to develop guidelines for building research and evaluation into the system.

4. Provide time for planning, research, and evaluation into staff assignments.

5. Develop lists of unanswered questions relating to such elements of schoolwork as: the curriculum; the teaching process; allocation of student's time; student selection; the guidance and placement function; and various management tasks that are in need of analysis and evaluation.

6. Develop a plan for research and evaluation for the years ahead, setting forth specific performance goals for FY 72, Fy 73, etc.

7. Make plans for the development of in-service institutes and college credit courses to help professional personnel become more closely involved in research and evaluation thinking and action.

8. Include in the federal funding proposal allocations for research and evaluation of the program being funded.

9. Provide for extra-work, extra-pay contracts for teachers to engage in research and evaluation tasks during the school year (much the same as a coaching contract).

10. Investigate the use of the advisory committees in the research and evaluation process in the local district (within their limitations).

11. Share and circulate (rather than file) material concerning R and E that comes through the central office.

12. Establish a local system of "mini-grants" to encourage and fund staff R and E projects and ideas.

13. Involve students in a structured evaluation of each course at the end of the school year.

14. Establish a system of evaluation which would indicate to the teacher and the student where each individual student is at any given time (milestones, behavioral objectives, etc.).

15. Provide seed money for use within local school districts for providing action programs in the classroom. Money needs to be easier to get.

16. Local districts, colleges, and State Departments collaborate to organize research activities.

17. Community colleges act as leaders of in-service institutes and programs in research for local districts.

18. Include a research and evaluation component into labor contracts of local districts.

19. Involve students in such activities, also PTA groups, student organizations, etc.

20. Eliminate or reduce routine work of teachers job to provide more time for research and evaluation.

21. Provide demonstration projects by different teachers to illustrate what can be done.

22. Encourage state colleges to avoid credit for independent studies in research and evaluation possibly unrelated to their programs. Local schools pay tuition for this evaluation.

23. Involve students in research and planning in school activities that create action research in programs.

24. Start by evaluating and identifying what is going on currently as action research in the school.

25. Stimulate and provide incentives by praise "token economy" awards - public or school recognition.

26. Utilize services of local teacher association and other teacher groups to help develop guidelines.

27. Build on small bits of research to develop and encourage continuous research and evaluation.

28. Encourage community involvement in research and evaluation in the school but recognize possible limitations i.e., Board of Education approval.

29. Increase cooperation between University, State and local districts in R and E.

30. Look to offering programs at local level for college credit. (Perhaps community colleges could assume leadership).

31. Increase professional visits by staff members.

32. Consider offering independent study credits for R and E efforts of local teachers.

33. Require the completion of X number of credits every so many years by staff members.

34. List what is presently going on in the district in R and E (as a starting point).

APPENDIX J

GUIDELINE FOR SPECIFIC ACTION IN HOME SCHOOL DISTRICT AND PLANS OF ACTION FOR RESEARCH IN THE PARTICIPANTS' SCHOOLS

Appendix J

Workshop E

Guidelines for Specific Action in Home School Districts

In this session, participants were encouraged to work independently, or in small sub-groups, if they prefer, with each attempting to develop a specific plan of action that could be initiated during the next school year. The following format was used:

1. Nature of the Local Research or Evaluation Activity

   A. Title.

2. Brief Description: How it differs from present programs and what it may accomplish.

3. Objectives: Given in specific performance terms.

4. Procedures.

   A. What will be done?

   B. Who will be in charge; who will be involved?

   C. What methods and materials will be used?

   D. How can the activity be built into the system?

   E. How will the activity be evaluated?

The action plans follow:

APPENDIX K

GUIDELINES FOR WORKSHOP LEADERS

WORKSHEETS 1-2-3-4-5

Leader's Work Sheet #1 May 5, 1970

Brainstorming: General Inhibitors to Local Research and Evaluation

What is "Brainstorming"? - It is open, unstructured and uninhibited.

The main job of the leader is to see that everyone takes part and that no one individual talks too long. A good rule to apply is that each contribution be limited to one minute or less and that no contributor speaks a second time until at least two other members of the group have spoken.

Leader should look ahead to Work Sheet #2 which has some structure. Without giving the headings to be used in the second session to persons in the first brainstorming session, use them for organizing the comments obtained. This can prime the pump for discussion on the second day.

Leader's Work Sheet #2 May 6, 1970

Specific Deterrents to Research and Evaluation

Use the following headings to prompt discussion--run down all of them first. Acknowledge that other headings may be added. Set a time limit on each to insure that all items will be covered.

A. Deterrents Derived from State Laws and Regulations

1.

2.

3.

4.

5.

B. Deterrents Resulting From Custom and Tradition

1.

2.

3.

4.

5.

C. Deterrents Associated with Administrative Processes

1.

2.

3.

4.

5.

(Worksheet #2 continued)

D. Financial Deterrents

1.

2.

3.

4.

5.

E. The Faculty

1.

2.

3.

4.

5.

F. The Board

1.

2.

3.

4.

5.

G. The Community

1.

2.

3.

4.

5.

(Worksheet #2 continued)

H. Other

1.

2.

3.

4.

5.

I. Other

1.

2.

3.

4.

5.

J. Other

1.

2.

3.

4.

5.

Leader's Work Sheet #3 May 6, 1970

Guidelines for Minimizing Deterrents

The purpose of this session is to generate guidelines for minimizing the deterrents to local implementation of research and evaluation which had been identified in previous workshop sessions.

A. Guidelines for Minimizing Legal Deterrents

1.

2.

3.

4.

5.

B. Guidelines for Minimizing Deterrents Resulting From Custom and Tradition

1.

2.

3.

4.

5.

C. Guidelines for Minimizing Deterrents Associated with Administrative Processes

1.

2.

3.

4.

5.

(Worksheet #3 continued)

D. Problems Associated with Financial Deterrents

1.

2.

3.

4.

5.

E. Problems Associated with the Faculty

1.

2.

3.

4.

5.

F. Problems Associated with the Board

1.

2.

3.

4.

5.

G. Problems Associated with the Community

1.

2.

3.

4.

5.

(Worksheet #3 continued)

H. Other

1.

2.

3.

4.

5.

Leader's Work Sheet #4 May 19, 1970

Guidelines for Building Research and Evaluation into Local Practice

This is the workshop session for presenting general ideas for building research and evaluation components into local practice. Using the following list to open discussion, the workshop leader should plan to come out of this session with a refined list of recommendations for action at the local level. These recommendations should have the general acceptance of the group.

The following list of actions is given as suggestions -- a number of other ideas should be generated through workshop action:

1. The incorporation of research and evaluation discussion into meetings of administrative staff members, and in school faculty meetings.

2. The identification of an administrative staff member to develop plans for incorporating research or evaluation or both into the system.

3. Appointment of a staff steering committee to develop guidelines for building research and evaluation into the system.

4. Providing time for planning, research, and evaluation into staff assignments.

5. Developing lists of unanswered questions relating to such elements of schoolwork as: the curriculum, the teaching process, allocation of student's time, student selection, the guidance and placement function, and various management tasks that are in need of analysis and evaluation.

6. Developing a plan for research and evaluation for the years ahead, setting forth specific performance goals for FY 72, FY 73, etc.

7. Making plans for the development of in-service institutes to help professional personnel become more closely involved in research and evaluation thinking and action.

Other:

Other:

Other:

Other:

Other:

Other:

Other:

Leader's Work Sheet #5 May 20, 1970

Guidelines for Specific Action in Home School Districts

In this session, participants should be encouraged to work independently -- or in small sub-groups if they prefer -- with each attempting to develop a specific plan of action that could be initiated during the next school year. The following format will be used:

1. Nature of the Local Research or Evaluation Activity

   A. Title

2. Brief Description: How it differs from present programs and what it may accomplish

3. Objectives: Given in specific performance terms

4. Procedures

   What will be done?

   Who will be in charge - Who will be involved?

   What methods and materials will be used?

   How can the activity be built into the system?

   How will the activity be evaluated?

Individual Work Sheet #6 May 20, 1970

Plan of Action For Home District

1. Nature of Local Research or Evaluation Activity

   A. Name of District_____

   _____

   B. Title of Activity_____

   _____

2. Description: How it differs from present programs and what it may accomplish.

3. Objectives: Given in Specific Performance Terms

   A.

   B.

   C.

4. Procedures

   A. What will be done?

(Worksheet #6 continued)

B. Who will be in charge; who will be involved?

C. What methods and materials will be used?

D. How can the activity be built into the system?

E. How will the activity be evaluated?